

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

10/055,356

Amendment with Restriction Election

Page 2 of 17

In the Claims:

Please amend the claims by adding, canceling, or rewriting them as shown below. A clean version of the entire set of the pending claims as amended is submitted herewith per 37 CFR § 1.121(c)(3). A marked-up copy of the claim(s) changed by this amendment, showing all changes made relative to the previous version of the claim(s), accompanies this paper on a separate sheet or sheets.

B1
1. (Amended) A method of improving electrical conductivity of lines of transparent conducting material carried on a substrate, comprising:

forming the lines of transparent conducting material on the substrate;

providing on the upper surface of each of the lines a covering layer extending from an end part of the line and partially covering the upper surface of the line; and

subjecting the lines to a metal electroplating process in which a plating potential is applied to each line at the end part whereby a metal layer is plated on the exposed surface area of the line, the covering layer serving to shield the underlying surface of the line during the plating.

S:\BR\GB\01\GB010015 AMENDMENT 3.128.DOC

10/055,356

Amendment with Restriction Election

Page 3 of 17

81
cont.

2. (Amended) The method of claim 1, wherein the covering layer is shaped such that the exposed surface of the line increases progressively away from the end part.

3. (Amended) The method of claim 2, wherein the covering layer tapers in width away from the end part.

4. (Amended) The method of claim 2, wherein the covering layer is stepped in width along the line.

5. (Twice Amended) The method of claim 1, wherein the covering layer extends from both ends of the line in similar manner and the plating potential is applied at both ends of the line during the plating process.

6. (Twice Amended) The method of claim 1, wherein the covering layer comprises photoresist.

7. (Twice Amended) The method of claim 1, wherein the step of forming the lines comprises:

depositing a layer of transparent conducting material over the substrate,

S:\BR\GB\01\GB010015 AMENDMENT 3.128.DOC

10/055,356

Amendment with Restriction Election

Page 4 of 17

B1
Cont.

depositing a photoresist layer over the layer of transparent conducting material and patterning the photoresist into a configuration corresponding to the desired lines, and

patterning the transparent conducting layer using the photoresist to leave the lines of transparent conducting material.

8. (Amended) The method of claim 7, wherein the photoresist layer is patterned into portions corresponding to the desired lines with each portion including a selected region having a first thickness and conforming with the form of the required covering layer with the remainder of the portion being of reduced thickness, and after patterning the transparent conducting layer the photoresist is partially etched to remove the areas of reduced thickness while leaving photoresist at the selected region which photoresist constitutes the covering layer.

9. (Twice Amended) The method of claim 7, and for use in the manufacture of a pixellated device comprising pixel electrodes of transparent conducting material carried together with the conductive lines on the substrate, wherein the photoresist layer is patterned into a configuration

S:\BR\GB\01\GB010015 AMENDMENT 3.128.DOC

10/055,356

Amendment with Restriction Election

Page 5 of 17

B1
cont.

corresponding also to the desired pixel electrodes, and wherein the transparent conducting layer is patterned using the photoresist to leave pixel electrode regions.

10. (Amended) The method of claim 9, wherein photoresist is left over the pixel electrode regions during the electroplating process.

~~11. A method of forming an active plate for a pixellated device, comprising:~~

- ~~depositing and patterning a gate conductor layer over an insulating substrate;~~
- ~~depositing a gate insulator layer over the patterned gate conductor layer;~~
- ~~depositing a silicon layer over the gate insulator layer;~~
- ~~depositing a transparent conductor layer over the silicon layer;~~
- ~~depositing and patterning a photoresist layer over the transparent conductor layer having a configuration defining source and drain areas, pixel electrode areas and conductor line areas associated with the source or drain conductors;~~

S:\BR\GB\01\GB010015 AMENDMENT 3.128.DOC

10/055,356

Amendment with Restriction Election

Page 6 of 17

patterning the transparent conductor layer using the photoresist to form source and drains, pixel electrodes and conductor lines;

defining the photoresist to leave a photoresist region on each conductor line extending from one end part of the line partially covering the surface of the line; and

selectively electroplating the exposed areas of the transparent conductor lines with a metallic layer with a plating potential being applied at the end part of each line.

B²

12. (Amended) The method of claim 11, wherein the photoresist layer is patterned into areas of different thicknesses at the conductor lines and wherein the step of defining the photoresist comprises partially etching the photoresist to remove the thinner areas.

13. (Twice Amended) The method of claim 11, wherein the photoresist is defined to leave on each line a similar photoresist region extending from the other end part and wherein the plating potential is applied also at that other end part.

14. (Twice Amended) An active matrix liquid crystal

S:\BR\GB\01\GB010015 AMENDMENT 3.128.DOC

10/055,356

Amendment with Restriction Election

Page 7 of 17

B²
Cont.

display device comprising an active plate) made according to claim 11, a further substrate carrying an electrode structure spaced from the active plate, and liquid crystal disposed between the active plate and the further substrate.

B³

15. (Newly Added) The method of claim 12, wherein the photoresist is defined to leave on each line a similar photoresist region extending from the other end part and wherein the plating potential is applied also at that other end part.

16. (Newly Added) The method of claim 8, and for use in the manufacture of a pixellated device comprising pixel electrodes of transparent conducting material carried together with the conductive lines on the substrate, wherein the photoresist layer is patterned into a configuration corresponding also to the desired pixel electrodes, and wherein the transparent conducting layer is patterned using the photoresist to leave pixel electrode regions.

17. (Newly Added) The method of claim 16, wherein photoresist is left over the pixel electrode regions during the electroplating process.

S:\BR\GB\01\GB010015 AMENDMENT 3.128.DOC

10/055,356

Amendment with Restriction Election

Page 8 of 17

B3
cont.

18. (Newly Added) The method of claim 2, wherein the step of forming the lines comprises:

depositing a layer of transparent conducting material over the substrate,

depositing a photoresist layer over the layer of transparent conducting material and patterning the photoresist into a configuration corresponding to the desired lines, and

patterning the transparent conducting layer using the photoresist to leave the lines of transparent conducting material.

19. (Newly Added) The method of claim 3, wherein the step of forming the lines comprises:

depositing a layer of transparent conducting material over the substrate,

depositing a photoresist layer over the layer of transparent conducting material and patterning the photoresist into a configuration corresponding to the desired lines, and

patterning the transparent conducting layer using the photoresist to leave the lines of transparent conducting material.

S:\BR\GB\01\GB010015 AMENDMENT 3.128.DOC

10/055,356

Amendment with Restriction Election

Page 9 of 17

B3
cont.

20. (Newly Added) The method of claim 4, wherein the step of forming the lines comprises:

depositing a layer of transparent conducting material over the substrate,

depositing a photoresist layer over the layer of transparent conducting material and patterning the photoresist into a configuration corresponding to the desired lines, and

patterning the transparent conducting layer using the photoresist to leave the lines of transparent conducting material.